

# NAVAL MEDICAL RESEARCH AND DEVELOPMENT NEWS

Volume VI, Issue 2

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## NMR&D Enterprise Junior Officer of the Year — Lt. Tara Smallidge, from NSMRL

*From NSMRL Public Affairs*

GROTON, Ct. -- The U.S. Navy Medicine Research and Development Enterprise announced the 2013 Junior Officer of the Year.

Capt Steven M. Wechsler, commanding officer, Naval Submarine Medical Research Laboratory, congratulated Lt. Tara Smallidge, research psychologist, department head, Warfighter Performance Department.

"It is my distinct privilege to present Lt. Tara Smallidge the NMR&D Enterprise Junior Officer of the Year award!" said Wechsler, during a recent command award ceremony. "This is a huge accomplishment and she is to be commended for her dedication and service." He added, "She earned this award above all others, and the competition was keen with candidates who have all done amazing jobs in their respective R&D commands."

"Lt. Smallidge consistently proves to be a stellar Naval officer, and I have yet to meet an officer more deserving." said Wechsler

"Thank you so much!" said Smallidge, "I'm very touched and honored."

Smallidge was assigned department head of the Warfighter Performance Department, as well as performing her primary duty as a research psychologist, overseeing four high visibility research projects. During this time, Smallidge displayed great organizational skills, departmental vision, stellar leadership, inexhaustible energy and never-ending enthusiasm while performing at the level of a more senior officer.

Her accomplishments resulted in building 18 research programs, supervising 11 personnel, and managing a \$3.65M budget; clearly demonstrating her ability to adapt and overcome challenges in this austere



*Lt. Tara Smallidge, NMR&D Enterprise Junior Officer of the Year.*

research funding and manning environment.

As a Junior Officer, Smallidge holds numerous collateral duties and her meticulous work ethic, keen organization, and upholding instructions was recognized personally by the Medical Inspector General during NSMRL's recent inspection, and she was presented a challenge coin for her outstanding performance.

Additionally, Smallidge sets the example for fitness standards in the Navy by scoring maximum on the Navy's last four physical fitness tests. Off duty, LT Smallidge volunteers in her community to promote yoga for Veterans.

## NMRC Commanding Officer's Message

In addition to updating people about our current activities and accomplishments, each of our R&D Newsletters is built around a general theme. The theme this month is "Value," with the plan to highlight how our work aligns with the Surgeon General's priorities. CAPT Rychnovsky has done an excellent job of describing her strategic thinking at NHRC and the purposeful actions being taken to meet those goals. We also see some great examples of the current value of our work on malaria control efforts and the NAMRU-San Antonio efforts on new approaches to infection control. However, what strikes me about this newsletter was the unintentional statement that value has been part of our work since long before it became an SG priority. There are wonderful stories about the history of the Navy Tissue Bank, the re-naming of the NSMRL library to honor Dr. Wayne Horn and his world renowned work in undersea medicine, and the announcement of Dr. Adam McKee's retirement after over 45 years of internationally influential service to Navy Medicine R&D. We are incredibly proud of our history. We are also very excited about our future. The recognition of LT Smallidge as the Enterprise Junior Officer of the Year, the work at NAMRU-3 to develop internships, and the collaborative planning with AFHSC described in this Newsletter shows me that we are still on course and our work will continue to provide real value to Navy Medicine.



NMRC Commanding Officer sends,  
John. W. Sanders III, CAPT, MC, USN

## NHRC Commanding Officer's Message:



I've been onboard Naval Health Research Center (NHRC) for nearly six months now and am grateful to the staff and NMRC leadership for supporting my transition to the Navy Medicine Research and Development enterprise. One of my first priorities has been to orient our command towards the future integration with the Defense Health Agency (DHA) while remaining aligned to Navy Medicine priorities and operational medicine requirements. We are currently in the process of developing a strategic plan, which we initiated in a three and a half day strategic planning workshop at the Naval Postgraduate School. We refined our mission and vision statements, and developed our strategic priorities of Value, Collaboration, and Visibility. Our strategic priorities were born from the realization that as we migrate to the DHA model, we need to continue delivering high value, high impact research products to the fleet and our sponsors. Our findings need to be on target, timely, and relevant; Build winning collaborative research teams both internally and with external partners; and Make sure our products and capabilities remain highly visible to our sponsors, line leaders, and end users. During his recent visit to NHRC,

Navy Surgeon General VADM Matthew Nathan was briefed on our current strategic planning efforts and how our new strategic priorities align well with his priorities of Value, Readiness and Jointness. The SG shared his commitment to remaining responsive to operational medicine issues in the course of developing the DHA model. We have strategic goal priority teams working to develop objectives, and then develop specific tasks that can be executed and measured to ensure we align and move towards our objectives. This means creating specific and measurable ways of maximizing value, incentivizing collaborations, and ensuring visibility. This is a critical step in the process, and where most strategic plans fail. Transforming priorities and broad objectives into specific tasks that are executable moves the strategic plan towards a business and operating plan – something concrete that our staff can take for action. With value being central to what we do as both a laboratory and an enterprise, we want to make sure we are the "preferred providers" of research, development, test and evaluation solutions for addressing expeditionary and operational medicine problems facing the Navy, Marine Corps, and Department of Defense.

NHRC Commanding Officer sends,  
CAPT Jacqueline Rychnovsky, NC, USN



## Adam E. McKee, Jr., DVM, Retiring

By Terri Brantley, NMRC Research Services Directorate

SILVER SPRING, Md. - There are very few in the R&D community who have not been influenced by Dr. McKee's work and benefited from his wisdom, clear sightedness and passion.

McKee graduated from Dillard University in New Orleans, La., earning a Bachelor of Arts degree. He enrolled in Tuskegee University in Tuskegee, Ala., where he earned his Doctorate of Veterinary Medicine degree. In 1958, he began his military career with the U. S. Air Force as a Veterinary Corp (VC) officer. His first assignment was Base Veterinarian in Istanbul, Turkey. His next assignment was Lackland Air Force Base, Texas, as a team member responsible for establishing the first DoD Sentry Dog Training Center Veterinary Medical Clinic. Following three years of clinical practice, McKee was selected for specialty training in Veterinary and Comparative Pathology at the Armed Forces Institute of Pathology, Walter Reed Army Medical Center, Washington, D.C. After completing the residency program he was assigned to the Naval Radiological Defense Laboratory in San Francisco, Calif. as a research pathologist.

His next assignment, the last active duty military assignment before retirement as a Colonel, was at the Naval Medical Research Institute (NMRI), Bethesda, Md. as a research ultrastructure pathologist. McKee's research focused on changes associated with electromagnetic radiation exposure, septic shock pathophysiology, and enhanced wound healing.

As a civilian, McKee directed NMRI's Pathobiology Department from 1978 to 1983. In 1983, he became NMRI's Director of the Combat Casualty Care Department where his team focused on fleet medical care, wound repair and septic shock. For eleven years, he directed a staff of over 75 members, including physicians, veterinarians, doctoral researchers and support personnel.

In 1994, he was tagged to lead the Technical Services Department where he oversaw the Pathology Department, Laboratory Animal Medicine and Science Department, the Clinical Diagnostics



*Dr. Adam E. McKee, Jr. retiring from the Naval Medical Research Center.*

Department, the Medical Research Library and the Biomedical Management Information Systems Department. Due to BRAC, NMRI closed and the Naval Medical Research Center (NMRC) was established. Since 1999, McKee has served as the NMRC Director, Research Services Directorate. He is responsible for providing NMRC and Navy Medicine's Research and Development Enterprise with cutting-edge professional research support services in pathology, laboratory animal medicine and science, clinical diagnostics, research administration, technology transfer, and legal and intellectual property. McKee is the author of more than 30 professional publications in peer reviewed journals.

McKee has served in several positions by direct appointment of the Navy Surgeon General including manger, BUMED's DoN Intergovernmental Personnel Act (IPA) Program; member, BUMED's Research and Development (R&D)

Organization Integrated Program Team (IPT); member of IPT (strategic/tactical planning group) for the establishment of the Navy's New Human Research Protections Program known as the Department of the Navy Human Research Protections Program (DON HRPP).

McKee is an active, lifetime member of the Omega Psi Phi Fraternity, Incorporated. He once served as the International Vice President for the organization which boasts over 750 undergraduate and graduate chapters. He is active with the Tuskegee Veterinary Medical Association (TVMAA). Having served as the organization's President, he remains committed to its annual educational pursuits.

McKee has taken every day to work hard, lead fairly, and encourage growth. In so doing, he has gained the attention and respect of his community.

## World Malaria Report 2013 Shows Major Progress, Navy Researchers Part of the Fight

SILVER SPRING, Md. - The global efforts to control and eliminate malaria have saved an estimated 3.3 million lives since 2000, reducing malaria mortality rates by 45 percent globally and by 49 percent in Africa, according to the World Malaria Report 2013 published by WHO.

According to WHO an expansion of prevention control measures has been mirrored by a consistent decline in malaria deaths and illness, despite an increase in the global population at risk of malaria between 2000 – 2012. The report can be found at [http://www.who.int/malaria/publications/world\\_malaria\\_report\\_2013/report/en/index.html](http://www.who.int/malaria/publications/world_malaria_report_2013/report/en/index.html).

The World Malaria Report 2013 summarizes information received from malaria endemic countries and other sources, and updates the analyses presented in the 2012 report. It highlights the progress made towards global malaria targets set for 2015, and describes current challenges for global malaria controls and elimination.

Despite all of the advances laid out in the report, Capt. Judy Epstein, Clinical Director of the Naval Medical Research Center (NMRC) Malaria Vaccine Development Program, points out that it is apparent a vaccine which provides robust protection against malaria infection is a critical tool in the prevention and, ultimately, elimination of malaria. She referred to an editorial from the April 24, 2010 issue of the scientific journal *Lancet* where the author states, "What is still needed is the only tool that has ever truly conquered any infectious disease: an effective and affordable vaccine...".

U.S. military forces are at great risk of developing malaria while deployed in endemic areas. Malaria has played a very significant role in the history of U.S. military casualties during times of combat. In fact, more person-days were lost among U.S. military personnel due to malaria than to bullets during every

military campaign fought in malaria-endemic regions of the world during the Twentieth century. To address this infectious disease threat to deployed warfighters, researchers at NMRC have been investigating methods to control and conquer malaria for more than two decades. This comprehensive research program is at the forefront of malaria research worldwide.

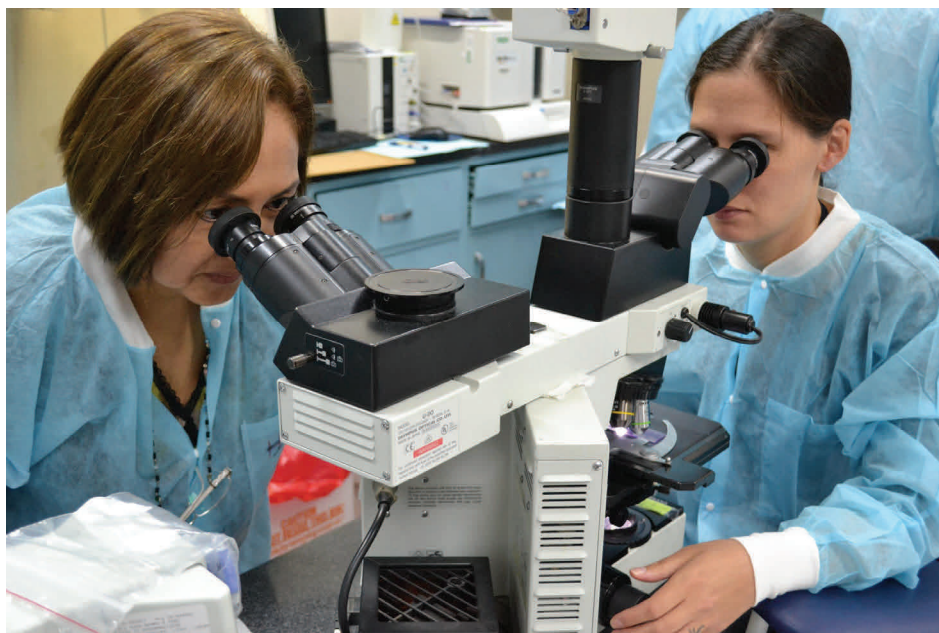
**The program's research activities range from discovery research in which researchers try to understand the nature of protective immunity, to clinical trials of candidate vaccines carried out in the NMRC Clinical Trials Center on the campus of the Walter Reed National Military Medicine Center, Bethesda, Md.**

Successful vaccine candidates can be transitioned to testing in field settings with collaborating institutions in Africa,

Asia, and South America. The program benefits from the Navy's overseas laboratories where researchers can study the epidemiology of the malaria parasite in its native habitat and can also coordinate field testing of novel vaccines and drugs.

Navy's overseas medical research laboratories are located in Lima, Peru (U.S. Naval Medical Research Unit No. 6); Cairo, Egypt (U.S. Naval Medical Research Unit No. 3); and the Pacific region (Naval Medical Research Center-Asia and U.S. Naval Medical Research Unit No. 2 detachment, Phnom Penh, Cambodia).

The laboratories are located in areas of the world where malaria is endemic. The Navy's malaria research team also works closely with their Army colleagues from the Walter Reed Army Institute of Research, which is collocated with NMRC at the modern research facility in Silver Spring, Maryland.



*CALLAO, Peru Lt. Kimberly Edgel, right, and Carmen Lucas examine a positive malaria blood smear at U.S. Naval Medical Research Unit No. 6 (NAMRU-6). NAMRU-6 studies malaria infection, diagnosis and treatment and is the only U.S. command in South America. (U.S. Navy photo/Released)*



## Laser-Induced Antimicrobials May Eradicate Combat-Related Pathogens

By Nancy J. Millenbaugh, PhD, NAMRU- San Antonio

SAN ANTONIO – Researchers at the Naval Medical Research Unit San Antonio (NAMRU-SA) are developing a new treatment for methicillin-resistant *Staphylococcus aureus* (MRSA) maxillofacial infections as an alternative to conventional antibiotics. Along with conventional multi-drug resistance, a challenging factor to successful treatment of infection is the formation of bacterial biofilms within the wound that act as a physical barrier against antibiotics and the host immune system, which impairs wound healing.

New approaches being developed at NAMRU-SA to overcome both traditional

multi-drug resistance and biofilm resistance mechanisms include pulsed laser irradiation combined with energy absorbing nanoparticles targeted against MRSA. Researchers hope this will significantly decrease the viability of the bacteria in planktonic and biofilm forms via generation of photothermal processes that induce physical damage to the bacterial cell wall and the biofilm matrix. This approach could provide effective at eradicating pathogens regardless of their level of antibiotic resistance.

If successful, this new treatment regime will give health care providers an alternative, non-pharmaceutical approach to treating combat wounds.

Combat wounds often present with a high rate of contamination from the environment and quickly become infected. Treatment of combat-related wound infections is complicated because a significant percentage is caused by multi-drug resistant bacteria such as MRSA.

NAMRU-SA's mission is to conduct medical, dental, and directed energy biomedical research to enhance the health, safety, performance, and operational readiness of Navy and Marine Corps personnel and addresses their emergent medical and dental problems in routine and combat operations.



Dr. Nancy Millenbaugh, research chemist (center) monitors a laser test being conducted by Don Marcello, electronic technician, left, as Jonathan Baskin, research biologist, right, examines bacterial samples at the Naval Medical Research Unit—San Antonio.

## WRAIR/NMRC Celebrates Dr. Martin Luther King Jr. Observance

SILVER SPRING, Md. – Bad weather forced the rescheduling of the Dr. Martin Luther King Jr. Observance at the Forest Glenn Annex, a U.S. Army installation and the site of the Walter Reed Army Institute of Research (WRAIR) and the Naval Medical Research Center (NMRC).

Sailors, Soldiers, civilians, contractors and guests filled the Albert Behnke Auditorium in the Daniel K. Inouye Building on post, January 28, to celebrate the life and legacy of Dr. Martin Luther King, Jr.

Capt. John Sanders, NMRC commanding officer, opened the program by acknowledging the importance of the celebration and reflecting on his memories of King and what the civil rights movement meant to our country. He focused on King's messages of opportunity, dignity and excellence.

"We all have to have the opportunity to be successful. Dr. King taught us that dignity

is not something given to us from other people but something that comes from within, because it has been bestowed on us from above. What he taught is that we should demonstrate that dignity with the excellence of our actions and our character," said Sanders.

Following Sander's comments, the audience saw a video clip of King's *I have a Dream* speech.

The guest speaker, William T. Fauntroy, Jr., a Tuskegee Airman, is a member of the New Bethel Baptist Church in Washington, D.C., where he first met Dr. King. Fauntroy, with humor, thoughtfulness and sincerity shared his memories and experiences of growing up in D.C.; the March on Washington, Aug. 28, 1963; and the need to keep the dream alive. He summarized King's civil rights efforts and assassination, April 4, 1968.

Fauntroy said he was there at the March on Washington when King gave his *I have a*

*Dream Speech*. Members of New Bethel Baptist Church got together and walked from the church to the National Monument. He said he had never seen that many people in one location at one time. The only place they weren't sitting or standing was in the pool, he added.

"Meeting him I can say Martin Luther King was a person you would always remember. He was a man of God. He was true to what he said he was. He helped a lot of people. He changed a lot of hearts and minds, not all, but many. I'm so glad God let me meet and touch this man. Martin always talked about love and nonviolence. I recommend to you to read his book of sermons, **Strength to Love**, written in 1963," said Fauntroy. Fauntroy ended by reading from King's book.

The event was hosted by the WRAIR/NMRC Multicultural Committee.



Dr. Martin Luther King Jr. Observance at WRAIR/NMRC, January 28, 2014. Left to Right: SGM Michael L. Brooks, WRAIR; William T. Fauntroy, Jr., guest speaker; and Capt. John W. Sanders, NMRC commanding officer.



## OIC NAMRU-3 Ghana Detachment Visits Cairo

*From NAMRU-3 Public Affairs*

CAIRO - Lt. Nehkonti Adams, the new Officer in Charge of the NAMRU-3 Ghana Detachment in Accra, visited the U.S. Naval Medical Research Unit No. 3 (NAMRU-3) in January. She attended briefings on the major programs and visited the NAMRU-3 offices that work with the Ghana Detachment.

This visit has been a great “eye-opener,” said Adams, “The original plans were for me to visit NAMRU-3 for orientation and check-in before reporting to the detachment in Ghana, but because of the evacuation I reported there directly. I am now aware of the full capabilities and abilities of NAMRU-3 to test for various pathogens causing infectious diseases. I was also impressed with the extent of the organization’s capacity building projects around the Middle East and Africa. Now

with a better understanding of how the Ghana Detachment fits into the organization, I understand where I fit in as well.”

The Ghana Detachment is part of the Noguchi Memorial Institute for Medical Research, with a laboratory and administrative spaces where the detachment’s manager and technicians work.

“It is a profitable collaboration that generates great scientific work to help address various infectious diseases which affect the people of Ghana,” said Adams. “We also have an administrative office at the U.S. Embassy. My staff and I participate in community outreach projects at the Embassy to further the U.S. mission’s goal in Ghana. We recently participated in a disaster preparedness fair

and I hosted a Peace Corps Volunteer for Thanksgiving and sponsored orphans for the holidays. We want to be a part of the Embassy team.”

She credited Capt. Buhari Oyoyo, NAMRU-3 commanding officer, with having had a positive impact on relations with the Ghanaians. “They feel we are truly dedicated to our mission there,” Adams said.

Adams has a distinct “in” while working in West Africa. A native Liberian, she came to the United States as a child. “I think it’s certainly an advantage to share a similar cultural background which allows work relationships to come easily,” said Adams.

“Taking this post is a way for me to give back by building capacity in West Africa,” said Adams.



NAMRU-3's Dr. Alia Zayed (left) shows Lt. Nehkonti Adams, OIC NAMRU-3 Detachment, (right) a mosquito larval control lab experiment, which is the nucleus of MIDRP-funded field control study in Ghana. Photo by Rafi George.

## R&D Chronicles:

# The “ Lone Eagle ” Lands at the Navy Tissue Bank

By Andre B. Sobocinski, Historian, Bureau of Medicine and Surgery

*“Only in the sky is there hope. Only in that which man has never touched  
and which God forbid that he ever will.”*

~Charles Lindbergh



U.S. Navy Tissue Bank, Bethesda, Md., in 1968—Left to right, Capt. Charles Brodine, Lt. Vernon Perry and Charles Lindbergh.

When Charles Lindbergh landed the *Spirit of St. Louis* in Paris in May 1927 he became the first person to fly solo across the Atlantic Ocean. But Lindbergh was not one to stay grounded for long. Over the next four decades the “Lone Eagle” would soar far beyond the aviation field making important contributions to conservation and even biomedical research in the U.S. Navy.

Lindbergh’s foray in medical research began after his sister-in-law suffered damage to her mitral valve following a bout with rheumatic fever. In seeking a cure he sought out Dr. Alexis Carrel of the Rockefeller Institute in New York, the leading organ and tissue researcher of the day. Throughout the 1930s, the two men collaborated on a machine that could pump circulating blood through the body while a heart could be prepared.

This “perfusion pump” was a glass apparatus where the nutrients could be supplied to the organ by an elaborate pump

(Continued on page 11)

## The Navy Tissue Bank—a short history

The Navy Tissue Bank was the innovation of Cmdr. George Hyatt starting in 1949. Over 50 years, Navy scientists working at the Tissue Bank developed numerous technologies and clinical procedures to make transplantation of skin, bone and other non-viable tissues useful for the practice of medicine and care of the injured.

The Navy initiated the American Association of Tissue Banks and today hundreds of tissue banks collect and provide hundreds of thousands of tissue specimens for clinical care each year.

In the mid 1960’s, Capt. Kenneth Sell led the transition of the tissue banking effort into the transplantation of organs and bone marrow and during the 1970’s the Naval Medical Research Institute worked together with the Bethesda Naval Hospital to institute transplantation of viable organs, kidneys and bone marrow.

Because of the accomplishments in marrow transplantation and transplant genetics, the Navy was asked by Congress to start the National Marrow Donor (NMDP) program in 1986.

The Navy created the research structure goals, guidance, and support of the NMDP at the initiation of the national program

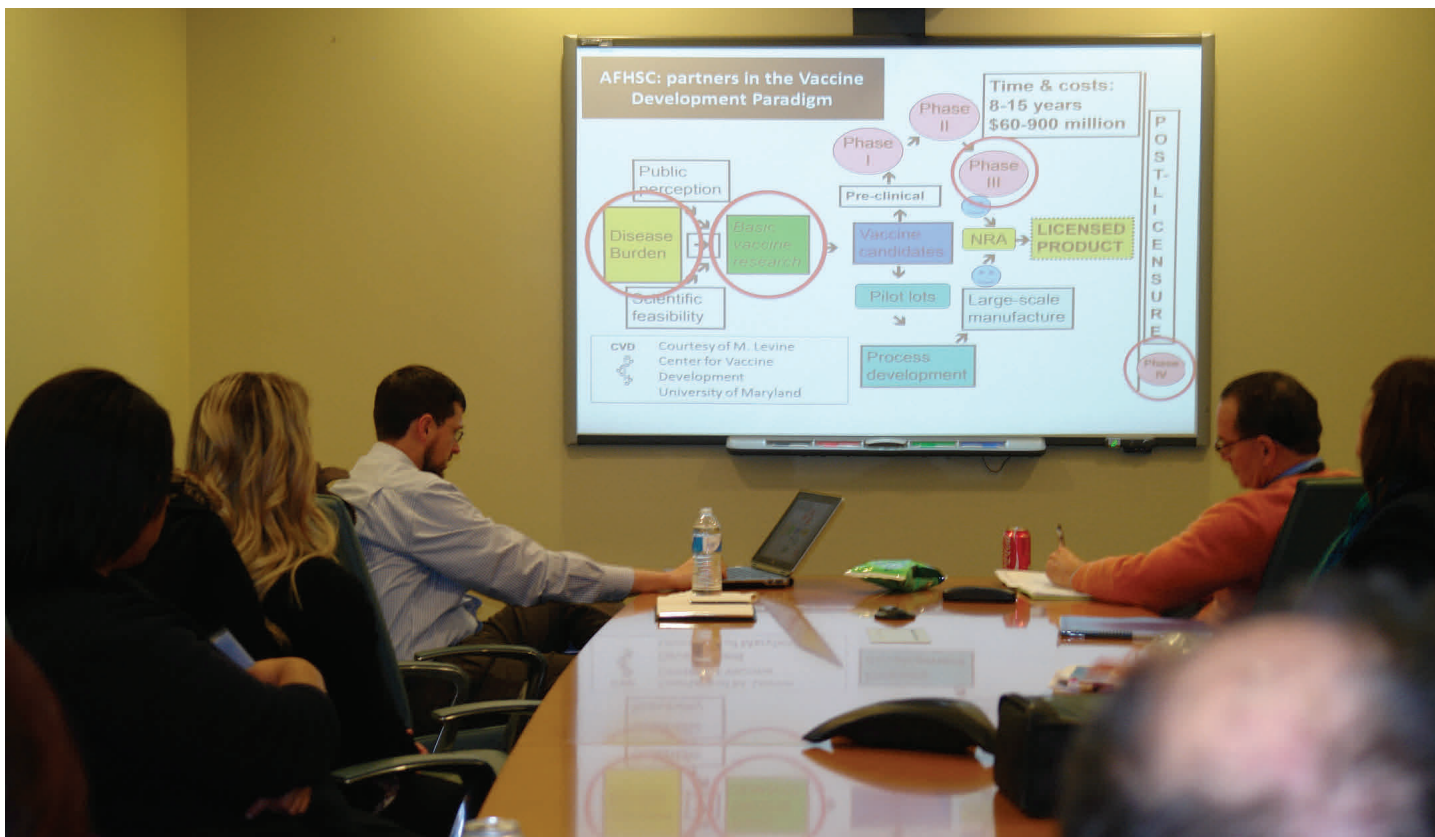
and continues guidance and support of the NMDP program to this day (2014).

In 1990, the Navy created the DoD Marrow Donor Program and has led the development of very precise testing of the DNA molecules of the HLA genes.

Today there are over 11,000,000 volunteer donors on the NMDP file and of these over 750,000 are DoD volunteer donors registered and genetically typed through this Navy program. Over 60,000 transplants have been performed through the NMDP and nearly 6,000 of these are DoD volunteers with the support of their Commands worldwide.



## NMRC Researchers Meet with AFHSC to Discuss Collaborations



Dr. Chad Porter (third from left) discusses key points where AFHSC collaborations impact DoD's enteric vaccine development programs. Photo courtesy of AFHSC.

SILVER SPRING, Md. – Researchers from the Naval Medical Research Center (NMRC) Enteric Diseases Department met with members of the Armed Forces Health Surveillance Center (AFHSC) to review the use of the Defense Medical Surveillance System (DMSS); the Defense Medical Encounter database (DMED) and the Serum Repository.

Dr. Chad Porter and other members of NMRC's Enteric Diseases Department (EDD) reviewed research efforts and collaborations during discussions that summarized previous, ongoing, and future EDD research projects which depend on these unique military databases.

The DMSS and DMED are the main repositories for medical encounter data for DoD beneficiaries and are maintained by the AFHSC and follow all active duty

U.S. military personnel from accession until discharge from military service.

DMSS data may be linked to active duty personnel serum samples stored in the DoD's Serum Repository. The DMSS and Serum Repository have become valuable resources for retrospective and surveillance research and may also enable prospective evaluations of interventions such as vaccine safety and efficacy studies.

Over several years, researchers in EDD's Epidemiology and Clinical Trials Branch, under Porter's guidance, have used the DMSS to execute multiple epidemiologic studies which describe the epidemiology of diarrheal disease across the whole military population.

Many of these studies were done in collaborations with undergraduate and graduate students from the Uniformed

Services University and other academic institutions.

Among other findings, these investigations have demonstrated an association between acute diarrheal disease and chronic functional and inflammatory gastrointestinal sequelae such as reflux disease, dyspepsia, irritable bowel syndrome and some inflammatory bowel diseases. Work to date has provided compelling evidence that acute infections and chronic health disorders are linked.

In the future, the department plans to design and execute studies which use the DoD Serum Repository and may elucidate pathoetiologic mechanisms between acute and chronic gastrointestinal disease as well as help identify biomarkers for susceptibility and early detection.

## NAMRU-3: Executing the Mission During the Evacuation

*From NAMRU-3 public affairs*

CAIRO - From June to November 2013, the majority of U.S. Naval Medical Research Unit No. 3 (NAMRU-3) active duty and GS staff were ordered to evacuate Cairo due to political unrest. This type of event could have seriously interrupted NAMRU-3's mission, but the evacuated team adapted. The remaining U.S. and Egyptian staff, with Commanding Officer, Capt. Buhari Oyofe, heading the command element in Cairo, faced many challenges and sometimes dangerous situations.

With multiple interruptions of work due to civil unrest, real-time communication was essential to fulfill NAMRU-3's obligations. The Cairo personnel handled the day-to-day operations while the evacuated personnel concentrated on taskers, program development, and reporting requirements.

Most of the evacuated team relocated to the Naval Medical Research Center (NMRC) in Silver Spring, Md. NMRC provided a 'soft landing' that began with coordinating all arrivals and initial lodging requirements and assigning the NAMRU-3 team to comparable research departments. NMRC provided assistance to maintain daily operations and support for the evacuated personnel and their families.

Having been stationed at NMRC before being assigned to NAMRU-3 it was easy for Lt. Cmdr. Gabriel Defang to fit back into the same offices and labs he had worked in before. "Because many of our projects were already in collaboration with NMRC, we were able to continue the mission of the Virology and Zoonotic Disease Research Program. Working with colleagues like Lt. Cmdr. Nick Martin and Dr. Tom Luke, we made significant progress on our projects," said Defang.

The evacuation held a silver-lining for many of the junior research staff. The four-month stay at NMRC allowed for frequent interactions with senior researchers in the capital region allowing them to refresh competencies, strengthen basic science proposals and other



*Lt. Joe Diclaro, NAMRU-3 Vector Biology Research Program, presents malaria brief to Operation Onward Liberty in Liberia. Operation Onward Liberty photo.*

collaborative initiatives. Meetings with major funding partners ensured closer alignment with research priorities and allowed for frank discussions of both hurdles and growth opportunities.

Defang commented on how his family coped with the evacuation, "On a personal level, my parents live in the D.C. area so it was great to have them nearby. My kids were happy with their temporary school arrangements as well, and they also kept up with their Cairo American College classmates on Facebook during the evacuation."

Lt. Joseph Diclaro, head of the NAMRU-3 Vector Biology Research Program spent the four months in West Africa where he was able to continue projects in Liberia, Ghana, and Nigeria. "It was challenging to remotely coordinate multiple teams to arrive in three separate countries, but we made it work," said Diclaro.

In collaboration with other programs at NAMRU-3 and other DoD labs, Diclaro

successfully met objectives in five separate research projects during the evacuation.

"Besides our projects we directly support deployed personnel like Operation Onward Liberty in Liberia. We can't let them down; they're why we do what we do," Diclaro continued.

It wasn't only the active duty that faced the stress of being dislocated. Personal and family welfare was a key concern during the evacuation. While many NAMRU-3 staff had been stationed in the Washington area before making the transition for their families easier, some had families at various locations in the U.S. NAMRU-3's command ombudsman, Jerione Diclaro, stayed in close communication with all evacuated families and let NMRC and NAMRU-3 leadership know of any concerns or problems.

The evacuated staff are now back at work and accomplishing a challenging mission in Cairo, Egypt.



## Naval Medicine Research Center Honors its 2013 Junior Officer of the Year

SILVER SPRING, Md. - Lt. Kevin C. Brown was selected as the Naval Medical Research Center's 2013 Junior Officer of the Year (JOYY).

Revered amongst the highest caliber of NMRC's junior officers, Brown was selected by a panel of Senior Directors for his exemplary performance and forward-leaning accomplishments. The Naval Medicine Research Center (NMRC) executive panel reviewed and evaluated several outstanding candidate's on their leadership, professional military knowledge, Navy Core Values, and military bearing in addition to their professional affiliations, educational accomplishments, community support, and physical readiness.

Brown is the Department Head for the NMRC Materials Management Department and recognized for his performance as an extraordinary leader, manager and mentor to sixteen military, government service, and contract personnel. His inspirational and tireless rejuvenation of all departmental policies, procedures and standards culminated in countless accolades for process improvements ranging from the meticulous management and timely execution of over 300 contracts totaling over \$43 million.

As a key compliance officer, Brown's strict governance of purchase card usage



*Lt. Kevin C. Brown was selected as the Naval Medical Research Center's 2013 Junior Officer of the Year.*

resulted in a 10 percent improvement and overall 98 percent compliance rate. As the Education and Training Officer, he not only established a Joint Service Support Agreement which provides an adequate venue, frequent presentation availability, and comprehensive compliance reporting but also as a result of his steadfast efforts, has yielded a 93 percent FY13 compliance rate.

Brown is a consummate ambassador of community outreach, serving as Youth Soccer Coach/Mentor for 5 and 6 year olds.

Brown is an invaluable command asset and an up and coming Naval Officer and Logistician with boundless potential with uncommon, yet phenomenal, abilities and attributes for an officer of his tenure.

## The "Lone Eagle" Lands at the Navy Tissue Bank

*(Continued from page 8)*

system designed by Lindbergh. Their work became the subject of their book *The Culture of Organs* and both would share the cover of *Time Magazine*, June 13, 1938. But World War II and the death of Dr. Carrel in 1944 put the project on hold.

It was a chance encounter at the Army-Navy Club in April 1965, between Lindbergh and Lt. Vernon Perry where Perry recruited Lindbergh as a "Guest Scientist." Over the next three years Lindbergh would commute regularly

between his home in Darien, Conn. and Bethesda to work on improving his perfusion pump.

In Lindbergh, Perry not only got a talented engineer and a famous face for the project, but also a tireless worker. Perry would later recall, "His industry in the laboratory was overwhelming; he had the ability to work around the clock. His younger colleagues accustomed to a more normal 12 to 14 hours at the bench soon gave way. When we were forced to retreat from exhaustion, he would carry on, monitoring

the apparatus, answering our phone calls, and writing in his journal. When we, after a good sleep, would next see him, he was as fresh as we and would comment that he had caught 'a few winks here and there,' probably expressed in this manner in an effort to reduce our own humiliation."

Ultimately the Lindbergh-Perry collaboration led to improvements in the original pump, two publications, and new hope for those whose lives depended on organ transplantations.

## NAMRU-3 Sponsors Students for Mini Internship in January

From NAMRU-3 Public Affairs



American University Cairo Winter intern, Saraa Abd El Hady, conducts mosquito control experiment in the NAMRU-3 Vector Biology Program laboratory. Photo by Rafi George.

CAIRO - As part of its mission to foster capacity building and support host country universities, the U.S. Naval Medical Research Unit No. 3's (NAMRU-3) Vector Biology Research Program (VBRP) hosted two biology majors from the American University in Cairo (AUC) over two weeks for a "mini" internship

program during the break from classes in January. Interested students post their CVs on the AUC "Career Web" and are notified when an internship related to their major is announced.

VBRP staff members geared their training to expand the students' knowledge and do hands on research and several worked with

the students to provide individualized training. Dr. Alia Zayed, Deputy VBRP head said, "I don't want to just stuff their brains. I tried to put a model about how to think about biological experiments for them to realize they are dealing with living organisms, rather than just reading about something from a kit."

One of the winter interns, Saraa Abd El Hady, a sophomore, says that while her goal is to be a neurologist, she's at the start of a long journey and was fascinated that NAMRU-3 is working on so many projects.

Saraa explained she only knew about vector control as an abstract concept. "Dr. Alia walked me through the process and gave me homework," she said. "We did experiments on an insecticide called BTI, which is a bacterium that works directly on the mosquito larval gut. We wanted to determine how effective the product is in killing mosquito larvae. We prepared different concentrations of the product and then provided it to the mosquito larvae. The percentage of mortality will indicate how effective and promptly the product works."

She then learned how to statistically evaluate the efficacy of the "agent". Next she troubleshooted how to avoid mistakes

*(Continued on page 13)*

## NSMRL's Redesigned Library Dedicated to Dr. Wayne Horn

GROTON, Conn - The Naval Submarine Medical Research Laboratory (NSMRL) dedicated the redesigned library to honor Dr. Wayne G. Horn, Medical Director at NSMRL (1999 – 2013), January 8.

"This library is being dedicated to his memory and to his honor so future generations of undersea medical researchers, scientists, and providers will reflect and remember Dr. Horn in perpetuity," said, Capt. Steven M. Wechsler, NSMRL commanding officer.

**Successful escape of submariners from a disabled submarine is only possible today thanks to Horn's commitment, ingenuity, and dedication.**

By dedicating the library in Horn's name, NSMRL salutes and celebrates his memory, commitment, and dedication.

Horn was a world renowned scientist and an icon in the field of undersea medicine with a long history of significant contributions to NSMRL. His research directly impacted submarine design and

operations. Horn was known for his dedication to the Navy, his leadership in medical research, his love of family, and appropriately his love of books.

Dr. Horn's lifelong contributions to the health and welfare of submariners will have immeasurable impact on generations of future submariners.

Horn's wife Frieda Horn; his daughter Allison and son David attended the dedication. Undersea Medical Officers from the Naval Undersea Medical Institute and the Submarine Escape Trainer also attended.



## NAMRU-3 Sponsors Students for Mini Internship in January

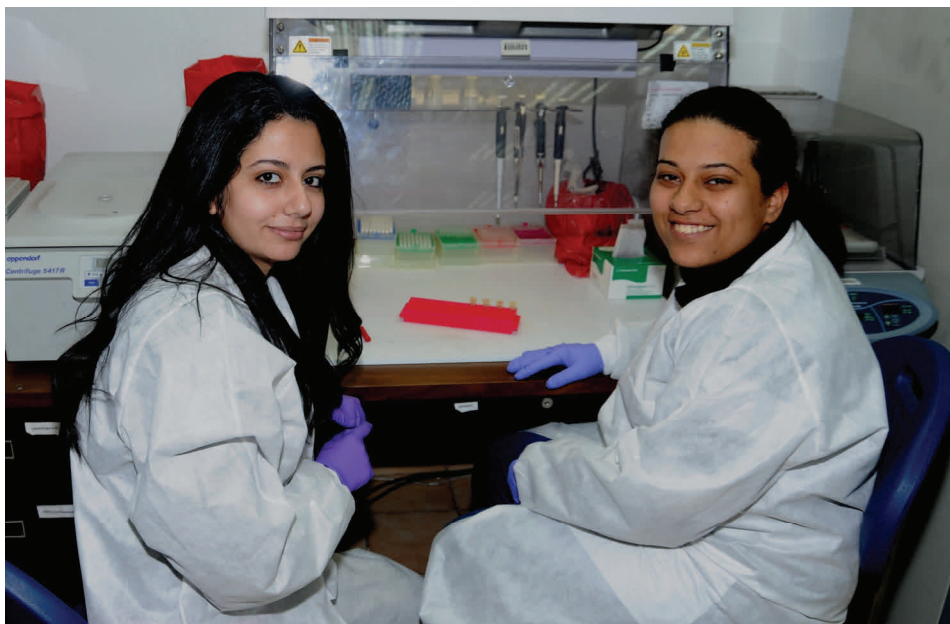
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during any biological “bioassay” experiment.

Dr. Zayed gave Saraa homework every day, first on specific subjects related to vector-borne diseases; then Saraa “zoomed in” on vectors in Africa and the Middle East, and the control methods there, so she could better understand the work VBRP is doing.

The other winter intern, Sarah Wassef’s dream is to become the first female cardiovascular surgeon in Egypt, “As a biology major, I know this is the real thing and I want to be good at it,” she explained. “I like the practical aspect of studies, which is why I like it here, because we are actually doing science, not just talking about it.”

Working with extracting and detecting larvae, Sarah worked with Nermeen Talaat and Rania Kaldas under the supervision of Dr. Hala Bassaly. “Sarah did not want just to learn how to do the assay in the lab; she was determined to understand and



NAMRU-3’s Ms. Nermeen Fahmy(left) trains American University Cairo intern, Sarah Wassef (right) on DNA extraction. Photo by Rafi George.

explore the concepts behind each step,” said Bassaly.

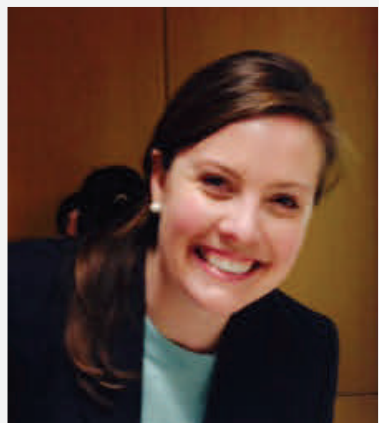
Both Saraa and Sarah are looking forward to applying for the NAMRU-3 Summer

Student Program to continue learning about NAMRU-3’s research activities.

“These AUC interns are truly interested in learning and think outside of the box.

## Greetings from the NMRC Ombudsman!

Hello and Happy Valentine’s Day! It’s February—love is in the air and I’ve been mulling over the idea of heart health. I’m not a doctor, but Google and the American Heart Association tell me heart disease is the number one killer of women and men in the U.S. According to the World Heart Federation, there are six main risk factors associated with heart disease: tobacco use and exposure, obesity or overweight, physical inactivity, high blood pressure, high cholesterol, and diabetes. The good news is heart disease is entirely preventable through maintaining a health diet, exercise, and stress management. But heart health is not just physical; it’s mental too. In a study done at Harvard, researchers found traits such as optimism and hope, and higher levels of happiness and satisfaction with one’s life were linked with reductions in risk of heart disease and stroke. As spouses, life in the Navy can be stressful and we can often find loads to complain about. Sometimes it helps to take a step back and look at the happiness we’ve found and the opportunities we have had. Yes, moving is hard and leaving friends we’ve made can be sad, but not everyone can say that they’ve had the opportunity to live overseas, to have a built in community in every place we’re stationed, or to swell with pride for your country at the homecoming of our service members. So for this month of heart health, let’s think of all the things that make our hearts smile and get happy because it’s good for your health!



Happy heart month from my Navy family to yours,

Allison

P.S. Here are some links to help you get happy: Pharrell Williams, Get Happy: <http://youtu.be/y6Sxv-sUYtM>; American Heart Association: [http://www.heart.org/](http://www.heart.org/HEARTORG/); Happiness Heart Study: <http://www.ncbi.nlm.nih.gov/pubmed/22506752>.